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THE TYPE SPECIES OF THE GENUS *SABATIA* ADANSON (GENTIANACEAE)

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ABSTRACT

The type species of the genus *Sabatia* Adans. (Gentianaceae) is *S. dodecandra* (L.) BSP. and not the species so designated in *Index Nominum Genericorum*. The status of the genera proposed by Adanson in *Familles des Plantes* is briefly discussed and it is suggested that stability would be better served by accepting *Familles des Plantes* by Adanson as a valid source of generic names rather than to discard it as has been recently recommended.

Key Words: *Sabatia*, *Gentiana*, typification, Gentianaceae, North America

The gentianaceous genus *Sabatia* consists of approximately twenty species primarily of the eastern United States but ranging to a limited extent into eastern Canada, the West Indies, and Mexico. Until recently the type species of *Sabatia* Adans. had invariably been stated to be *S. dodecandra* (L.) BSP. (Britton and Brown, 1913; Blake, 1915; Wilbur, 1955; Perry, 1971; Wood and Weaver, 1982). This generic typification had generally been unchallenged and alternative nominees to be the type species of *Sabatia* Adans. have not been suggested to my knowledge before the unfortunate entry in *Index Nominum Genericorum* (= ING) (1979, 3: 1541) where the type of *Sabatia* is indicated to be *Gentiana saponaria* L.

Sabatia was originally published by the highly individualistic Adanson in his *Familles des Plantes* 2: 503. 1763 as an apparently monotypic genus and as such, in Adanson's nomenclatural system, it bore only the generic name without a specific epithet. The various genera were contrasted briefly in a tabular chart and for *Sabatia* we learn that it was based on "Gentiana Gronov. virg. 29," a reference to p. 29 of *Flora Virginica* published by Gro-

novius based on a manuscript sent by John Clayton where very adequate diagnoses appear. Three species of *Gentiana* were described on p. 29 of *Flora Virginica*. Only one of these three species was there described as having the sepals, petals, and stamens each in twelves as indicated by Adanson in his tabular chart as features of his newly described genus *Sabatia*. The Gronovian polynomial for this species, which often does have a 12-parted flower, is *Gentiana floribus duodecim petalis, foliis distinctis*. Linnaeus (Sp. Pl. 1: 190. 1753) based his *Chironia dodecandra* solely upon this Gronovian polynomial, although he mistakenly and carelessly cited "Gron. virg. 27," a page dealing exclusively with asclepiads and which of course does not bear the Gronovian polynomial quoted by Linnaeus.

There seems no reason whatsoever to consider two of the three species named as species of *Gentiana* on Gronovius' *Flora Virginica* p. 29 as the type of *Sabatia* Adans.: 1) *Gentiana caule ramisque ramosissimus, foliis subulatis minimis* has 5 sepals and 5 yellow petals, excluding it obviously from consideration as a possible type of the 12-parted *Sabatia* Adans.; it was given the binomial *Sarothra gentianoides* L. (Sp. Pl. 1: 272. 1753) and is usually known to us as *Hypericum gentianoides* (L.) BSP.; and 2) *Gentiana floribus ventricosus campanulatis erectis quinquefidis, foliis ovato-lanceolatis*, which Linnaeus cited as *Gentiana saponaria* (Sp. Pl. 1: 228. 1753), is a compound Linnaean species from which *G. catesbaei* Walt. has since been segregated. Clearly *Gentiana saponaria* L. has no claim to be considered the type of *Sabatia* Adans. in spite of its listing in ING. The 5-parted calyx and corolla and the 5 anthers of *Gentiana saponaria* all conflict with the stated 12-parted calyx and corolla and the twelve laterally twisted anthers indicated as the diagnostic features by Adanson for his *Sabatia*. The type of the genus *Sabatia* Adans., therefore, remains the species known as *Sabatia dodecandra* (L.) BSP.; it has nothing to do with *Gentiana saponaria*, the species wrongly stated to be its type in the invaluable and usually most reliable reference *Index Nominum Genericorum*.

The above might all be left unsaid as so obviously a careless error that it would be apparent to all or at least to all living within the range of the genus and even remotely concerned with it. However, Parkinson (1987a, 1987b, 1987c, 1987d) has published a series of papers challenging the legitimacy of all the generic names published in Adanson's *Familles des Plantes* and in it repeated

the ING error concerning the typification of *Sabatia*. Parkinson argues that Adanson clearly did not accept or utilize the Linnaean binomial system and consequently all of Adanson's many generic proposals lack legitimacy. To be used in the future these names, in Parkinson's opinion, must either be conserved or if taken up by a later author, the generic name is to be attributed to that later author as the publishing author and not to Adanson. It seems most unlikely that Adanson's *Familles des Plantes*, a work that has been considered as a legitimate source of many generic names by most investigators for over a century, will be ruled as an invalid source based on Parkinson's conclusion that Adanson's failure to provide a binomial for either the first (= type) species of the genus or of a monotypic genus constitutes adoption of unitary nomenclature. In Parkinson's opinion this failure rendered all the names in the book invalidly published as being contrary to Art. 20.4b of the ICBN. It would seem to me that Adanson was reasonably within the Linnaean binomial system but chose this idiosyncratic method of denominating the original or typical element of the genus. Convention plays a role in such matters, and it has been botanical convention for more than a century to accept Adanson's *Familles des Plantes* as a valid source of generic names. Parkinson recognized as much (1986a, p. 95) and predicted that many will want to modify the code so that Adanson's genera may continue to be accepted as they have been in the past. After all, generic names are accepted from John Hill's *The British Herbal* (1756–57) and other post-1753 botanical works which did not approximate the Linnaean binomial system nearly as closely as did Adanson's publication.

It should be pointed out that Parkinson's analysis of the minor adjustments required by his suggested mandatory abandonment of Adanson's *Familles des Plantes* as a source of validly published generic names seems overly optimistic. The numerous changes required if *Familles des Plantes* were to be proscribed would, in my opinion, be much more drastic than advertised. If, as suggested by Parkinson, we were to accept the generic name of this gentianaceous genus as starting with Salisbury (1806) we find that the generic name in *Paradisus Londinensis* appeared as *Sabbatia* and not *Sabatia*. The lengthy effort to get botanists to follow Adanson's original orthography of *Sabatia* as required by Art. 73 of the ICBN would then need to be reversed; *Sabbatia* Salisb. (Parad. Lond. 1806) might then be the correct generic name and

orthography except that *Sabbatia* Moench (Meth. 386. 1794) clearly has priority over Salisbury's publication. Furthermore, *Sabbatia* Moench is an earlier name for the large mint genus *Micromeria* Benth. (Edward's Bot. Reg. 15: sub *t.* 1282. 1829) which is currently conserved but would need to be reconseved if Adanson's generic names from *Familles des Plantes* were to be now ruled as illegitimate. Salisbury described and illustrated an annual species that spontaneously appeared in his London garden that he took to be the same as *Chironia gracilis* Michx. However, the species Salisbury described and illustrated was the plant that has been called *Sabatia stellaris* Pursh, an annual usually of saline flats, while *Chironia gracilis* Michx. is a perennial of definitely non-saline savannahs, swales, and open piney woods. Prior to the Sydney Botanical Congress (1981), this problem of typification would have been settled in favor of the species described (i.e., *S. stellaris* Pursh, a species formally named by Pursh in 1814). Since the Sydney Botanical Congress, Article 10.1 of the 1983 ICBN mandates that the type be determined by the species named and not by the species described. The type of the genus *Sabbatia* Salisb. would then be *S. gracilis* (Michx.) Salisb. (= *S. campanulata* (L.) Torr.), a species belonging to a very different section of the genus than *S. dodecandra* (L.) BSP., the usually recognized type of the genus *Sabatia* Adans. It does not require the vision of an astrologer to predict that the adjustments required by the acceptance of Parkinson's argument for the non-legitimacy of the generic names proposed by Adanson would be considerably more drastic than suggested. It would seem to me not to be in the interest of nomenclatural stability to rule at this late date that all generic names in Adanson's *Familles des Plantes* were invalidly published.

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